HM-USB User Manual

Introduction
The HM-USB HART Modem, USB is designed to connect PC's to HART networks. Application software can then configure, monitor, and document HART based instrumentation.

Software Drivers
Before use, a USB Virtual Serial Port must be installed on the PC. Simply connect the HM-USB USB cable to the PC and follow the Windows new hardware installation prompts.

Note that two components will be installed, "Serial Converter" and "Comport Emulation Driver".

After installing, and with the HM-USB still connected to the PC, go to Start -> Settings -> Control Panel -> System -> Hardware -> Device Manager -> Ports, to see what com port number was assigned to the modem by the Windows operating system. The port labeled "USB Serial Port" is the assigned port.

This port assignment can be changed by the user. From the "Device Manager" menu, select the USB Serial Port you wish to change. From the "Properties" page, select "Port Settings". Then select "Advanced". The Com port can be set in the range 1-256.

HART Connections
The modem can be connected in one of two ways: across the loop load resistor (A – B) or across the HART transmitter terminals (C – D). See Figure 1.

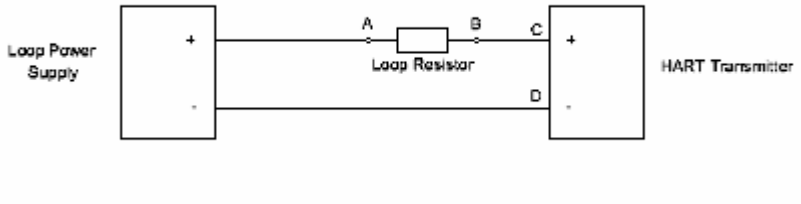

Figure 1. HART Connections

USB Connection
Connect the integral USB-A connector to any available USB port on your PC. The module supports both USB 1.1 and USB 2.0.

Power
No external power sources are required for the HM-USB. Power is derived from the USB connection to the PC.

Test Software
Program "HM Test" is included on the installation CD to test the operation of the HM-USB. Launch the program from the CD or from the installed icon. Enter the com port that was assigned to the modem by Windows. Then select "Poll HART Network" to connect to a HART device. The program sends HART Command 0 to determine what transmitters are connected to the loop. The "Status" box will indicate successful operation of the HM-USB in your system. Consult the "Troubleshooting" section of this manual if test failure.

Troubleshooting
Verify the following:
1. Com port number in application is the HM-USB com port number.
2. Loop power supply is on.
3. Loop resistance between 250 ohms and 1Kohms.
4. Loop current within HART limits.
5. If multi drop configuration, all transmitters in loop have unique addresses.
6. HM-USB HART connections across loop resistor or across transmitter terminals.
7. HM-USB USB connector seated firmly in PC USB connector.

Warranty
The USB-HM is warranted for 1 year for materials and workmanship. Contact Support at ProComSol, Ltd if having trouble. An RMA (Return Material Authorization) number obtained from ProComSol, Ltd is required on all returned items.

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